

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1.(Currently Amended) ~~Inflation~~ An inflation circuit comprising a compressed fluid source, a compressed fluid supply line connected to the source, a valve interposed in the supply line between a reception chamber and the fluid source, a branch connected to the supply line between the valve and the source, a calibrated leak device communicable with the supply line in order to form a calibrated leak of compressed fluid from the supply line, wherein the valve is a springless non-return valve which includes a free differential valve having a free floating stopper, the valve having a supply line side communicating with the fluid supply line, and a reception chamber side communicating with the reception chamber, the stopper being movable between open and closed positions in response to a fluid pressure differential between a the supply line side ~~of the stopper~~ and a the reception chamber side of the ~~stopper valve~~, the stopper being biased to the open position when a greater pressure occurs at the supply line side to enable fluid to flow between the supply line side and the reception chamber side, wherein the stopper is permitted to close gradually by the calibrated leak to enable a limited amount of fluid to flow from the reception chamber side to the supply line side if communication between the compressed fluid source and the supply line is blocked.

2. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, wherein the reception chamber is disposed in a wheel intended to be equipped with a tire, and in that the valve is mounted in an axis of the hub of the wheel.

3. (Currently Amended) ~~Circuit~~ The circuit according to claim 2, wherein the non-return valve is rotatable with the wheel.

4. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, further including ~~a loss of head device comprising~~ an adjustable choke between the reception chamber and the non-return valve.

5. (Canceled)

6. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, wherein the free differential valve comprises a hollow ferrule surmounted by a cap with the stopper floating in an inner space of the cap at the top of the ferrule.

7. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, wherein the free differential valve further comprises a circular cylindrical plate with a first diametric perforation communicating with a second perforation ~~starting from~~ intersecting a circular face of the plate, wherein the stopper is mounted adjacent to the second perforation.

8. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, wherein the calibrated leak device communicates with the supply line through a branch connected to the supply line, wherein the non-return valve comprises a circular cylindrical plate equipped with a circular groove formed in its peripheral face and two toric joints bordering this groove.

9. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, wherein the calibrated leak device communicates with the supply line through a branch connected to the supply line, the circuit further including an actuated valve (EVGF) in the supply line for isolating the fluid source from the branch.

10. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, wherein the calibrated leak device is disposed in a diversion line connected to a branch which is connected to the supply line, the circuit; further including a valve (EVDG) interposed in the diversion line between the calibrated leak device and the branch.

11. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, further comprising a pressure or output measuring device (CP1) which is connected to the supply line.

12. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, further comprising an adjustment circuit for controlling the calibrated leak device from a signal issued by a pressure or output measuring device.

13. (Currently Amended) ~~Circuit~~ The circuit according to claim 9, further comprising, on the supply line, additional branches mounted between non-return valves (VA, VB, VC, VD) of plural reception chambers and the fluid source, and a set (EVA, EVB, EVC, EVD) of valves mounted on distribution lines connected to the branches.

14. (Currently Amended) ~~Circuit~~ The circuit according to claim 13, wherein the non-return valves can be controlled independently of one another.

15. (Original) ~~Circuit~~ The circuit according to claim 1, wherein the leak is calibrated in order to permit total deflation of the chamber in more than 50 seconds.

16. (Currently Amended) ~~Circuit~~ The circuit according to claim 1, wherein the ~~free~~ differential valve comprises a cap with an internal trefoil-shaped profile.

17. (Currently Amended) ~~Inflation~~ An inflation circuit comprising a compressed fluid source, a compressed fluid supply line connected to the source, a non-return valve interposed in the supply line between a reception chamber and the fluid source, a branch connected to the supply line between the non-return valve and the source, a calibrated leak device communicable with the supply line in order to form a calibrated leak of compressed fluid from the supply line, wherein the reception chamber is defined by a wheel intended to be equipped with a tire, and further comprising ~~a loss of head device comprising~~ an adjustable choke disposed in the

wheel between the non-return valve and the compressed fluid reception chamber of the wheel.

18. (Canceled)

19. (Currently Amended) ~~Circuit~~ The circuit according to claim 17, wherein the non-return valve is springless and includes a free differential valve.

20. (Currently Amended) ~~Circuit~~ The circuit according to claim 19, wherein the free differential valve is mounted in a hub of the wheel along a rotary axis of the wheel.

21. (Currently Amended) ~~Circuit~~ The circuit according to claim 19, wherein the free differential valve comprises a hollow ferrule surmounted by a cap and a stopper floating in an inner space of the cap at the top of the ferrule.

22. (Currently Amended) ~~Circuit~~ The circuit according to claim 17, wherein the non-return valve comprises a circular cylindrical plate (76) with a first diametric perforation communicating with a second perforation ~~starting from~~ intersecting a circular face of the plate, the free differential valve being mounted opposite to the second perforation.

23. (Currently Amended) ~~Circuit~~ The circuit according to claim 17, wherein the non-return valve comprises a circular cylindrical plate (76) equipped with a

circular groove formed in its peripheral face and two toric joints bordering this groove.

24. (Currently Amended) ~~Circuit~~ The circuit according to claim 17, further comprising an actuated slide valve (EVGF) for isolating the fluid source from the calibrated leak.

25. (Currently Amended) ~~Circuit~~ The circuit according to claim 17, further comprising a slide valve (EVDG) interposed between the calibrated leak and the supply line.

26. (Currently Amended) ~~Circuit~~ The circuit according to claim 17, further comprising a pressure or output measuring device (CP1) connected to the supply line.

27. (Currently Amended) ~~Circuit~~ The circuit according to claim 17, further comprising an adjustment circuit for controlling the calibrated leak device from a signal issued by a pressure or output measuring device.

28. (Currently Amended) ~~Circuit~~ The circuit according to claim 17, further comprising on the supply line a plurality of branches mounted between respective non-return valves (VA, VB, VC, VD) of plural reception chambers and the fluid source, and a set (EVA, EVB, EVC, EVD) of slide valves mounted on respective distribution lines connected to the branches.

29. (Currently Amended) ~~Circuit~~ The circuit according to claim 28, wherein the non-return valves can be controlled independently of one another.

30. (Currently Amended) ~~Circuit~~ The circuit according to claim 17, wherein the leak is calibrated to permit total deflation of the chamber in more than 50 seconds.

31. (Currently Amended) ~~Inflation~~ An inflation circuit of a wheel intended to be equipped with a tire, the circuit comprising an interposed non-return valve and a hub intended to receive the wheel, the hub having an axis of rotation, wherein the non-return valve is mounted in the hub and includes a movable element movable along the center axis of rotation of the wheel.

32. (Currently Amended) ~~Circuit~~ The circuit according to claim 31, wherein the valve is rotatable with the wheel.

33. (Currently Amended) ~~Circuit~~ The circuit according to claim 31, further comprising a compressed fluid source, a supply line for the compressed fluid connected to the source, the non-return valve being interposed in the supply line between a reception chamber of the wheel and the fluid source, a branch connected to the supply line between the non-return valve and the source, a diversion line connected to the branch, and a calibrated leak device connected to the diversion line

in order to realize a calibrated leak of compressed fluid from the branch, the non-return valve being springless and including a free differential valve.

34. (Currently Amended) ~~Circuit~~ The circuit according to claim 31, further comprising ~~a loss of head device comprising~~ an adjustable choke interposed between a compressed fluid reception chamber of the wheel and the valve.

35. (Canceled)

36. (Currently Amended) ~~Circuit~~ The circuit according to claim 31, wherein the non-return valve is springless and includes a free differential valve which includes the movable element.

37. (Currently Amended) ~~Circuit~~ The circuit according to claim 36, wherein the free distribution valve comprises a hollow ferrule surmounted by a cap and a stopper floating in an inner space of the cap at the top of the ferrule, the stopper defining the movable element.

38. (Currently amended) ~~Circuit~~ The circuit according to claim 31, wherein the ~~non-return~~ non-return valve comprises a circular cylindrical plate (76) with a first diametric perforation communicating with a second perforation ~~starting from~~ intersecting a circular face of the plate, the free distribution valve being mounted opposite to the second perforation.

39. (Currently Amended) ~~Circuit~~ The circuit according to claim 31, wherein the non return valve comprises a circular cylindrical plate (76) equipped with a circular groove formed in its peripheral face and two toric joints bordering the groove.

40. (Currently Amended) ~~Circuit~~ The circuit according to claim 31, further comprising an actuated slide valve (EVGF) for isolating the fluid source from the supply line.

41. (Currently Amended) ~~Circuit~~ The circuit according to claim 33, further comprising a slide valve (EVDG) interposed in the diversion line between the calibrated leak device and the branch.

42. (Currently Amended) ~~Circuit~~ The circuit according to claim 31, further comprising a pressure or output measuring device connected to the supply line.

43. (Currently Amended) ~~Circuit~~ The circuit according to claim 31, further comprising an adjustment circuit for controlling the calibrated leak device from a signal issued by a pressure or output measuring device.

44. (Currently Amended) ~~Circuit~~ The circuit according to claim 33, further comprising on the supply line, supplementary branches mounted between non-return respective valves of plural reception chambers and the fluid source, and a set (~~EVA, EVB, EVC, EVD~~) of slide valves mounted on distribution lines connected to the branches.

45. (Currently Amended) ~~Circuit~~ The circuit according to claim 44, wherein the slide valves can be controlled independently of one another.

46. (Currently Amended) ~~Circuit~~ The circuit according to claim 31, wherein the leak is calibrated to allow total deflation of the chamber in more than 50 seconds.

47. (Currently Amended) ~~Wheel~~ A wheel comprising an inflation circuit according to claim 31.

48. (Currently Amended) ~~Circuit~~ The circuit according to claim 17, wherein the choke comprises a perforated screw extending from the hub to a radially outer periphery of the wheel.